



# UNITED STATES PATENT AND TRADEMARK OFFICE

*cea*

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,042	12/01/2003	Kuci-Chi Yang	YANG 3162/EM	1532
23364	7590	05/30/2007	EXAMINER	
BACON & THOMAS, PLLC			AHN, SAM K	
625 SLATERS LANE			ART UNIT	
FOURTH FLOOR			PAPER NUMBER	
ALEXANDRIA, VA 22314			2611	
			MAIL DATE	DELIVERY MODE
			05/30/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/724,042

Applicant(s)

YANG, KUEI-CHI

Examiner

Sam K. Ahn

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "PC... convert the read measured frequency into a real frequency...", as recited in claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the read measured frequency" in line 15. There is insufficient antecedent basis for this limitation in the claim. The "power meter" as recited provides a measured power to the PC. Thus, the power measurement received by the PC reads the received power. However, the claim does not recite wherein the PC further receives "read measured frequency". Therefore, the claim fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas US 6,392,397 B1 in view of Najarian et al. US 2004/0042563 A1 (Najarian).

Regarding claim 1, Thomas teaches a spectrum measurement system for measuring a spectrum of a wireless communication device to be finished (see Fig.6), comprising: a down converter for decreasing a frequency of the amplified signals to an IF (8 outputting IF signal); an IF filter coupled to the down converter for receiving the IF signals from the down converter and filtering the same based on a predetermined frequency resolution and a predetermined center frequency (9 having a predetermined frequency resolution of an allowable bandpass frequency and wherein one skilled in the art would recognize that a frequency range within the bandpass includes a center frequency); a power meter coupled to the IF filter for measuring a power of the IF signals (14,15, measuring power level, note c.8, l.25); and a PC coupled to the power meter via a first control interface (1 coupled to 14,15 via its interface), the PC being operative to read the measured power from the power meter (reading from the memory table 15), convert the read measured frequency into a real frequency based on a created calibration table, take the real frequency as a frequency axis and the power as a power axis, and plot a frequency analysis graph with respect to the wireless communication device to be measured (plotting in Fig.9b wherein x axis is the real frequency and y axis is the power level from 14, and wherein the IF frequency is converted to real frequency, and teaches the calibration table in Fig.15, note c.8, l.43-46 wherein the received IF frequency is converted and displayed as the real frequency).

However, Thomas does not explicitly teach a preamplifier for receiving input signals from the wireless 5 communication device to be measured and pre-amplifying the same, wherein the preamplifier is coupled to the down converter. Najarian teaches a receiver comprising a preamplifier (an amplifier coupled to receive an incoming signal 18 in Fig.2) further coupled to a down converter (62). Najarian further teaches that the amplifier allows the receiver to achieve sufficient gain and noise figure performance, thereby eliminating the need for any external gain, including antenna gain, (note paragraph 0024).

Hence, both Thomas and Najarian teach a receiver receiving a wireless signal wherein Najarian further suggests the amplifier coupled to receive incoming signal prior to providing to the down converter in the receiver to achieve sufficient gain and noise figure performance, thereby eliminating the need for any external gain, including antenna gain, (note paragraph 0024). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the teaching of Najarian in the receiver of Thomas by implementing an amplifier as taught by Najarian prior to downconverting (8 in Fig.6) for the purpose of achieving sufficient gain and noise figure performance, thereby eliminating the need for any external gain, including antenna gain, (note paragraph 0024).

Regarding claim 2, Thomas further teaches a synthesizer (7) coupled to the PC (1) via its second control interface where in the PC provides a command to set

the frequency for a reference frequency (note c.1, l.46-50). However, Thomas does not explicitly teach wherein the teaching of the synthesizer includes a VCO and a scanning circuit.

Najarian further teaches a synthesizer comprising a VCO and a scanning circuit (46 including VCO 48 and scanning circuit which provides a predetermined waveform from element 56 via 58,52,60 to VCO 48).

One skilled in the art would further recognize that the VCO generating a local oscillation frequency (1392.28MHz, see Fig.2) is varied depending on the output of 52). Najarian further suggests that the elements within the synthesizer forms a phase lock loop (note paragraph 0017), wherein the phase lock loop is well-known in the art of a circuitry adjusting its output based on a phase difference. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the teaching of Najarian in the system of Thomas of implementing the elements of the synthesizer in the synthesizer of Thomas for the purpose of forming a phase lock loop (note paragraph 0017).

Regarding claim 3, Thomas further teaches wherein the calibration table is created by coupling the measured wireless communication device selected from a series of wireless communication devices having a bandwidth complied with the specifications to the spectrum measurement system, and activating the PC to refer the read measured spectrum to a real spectrum of the wireless communication device (wherein the wireless communication device selected is

illustrated in Fig.6 and read the calibration table in Fig.15 to finally display the result in Fig.16).

Regarding claim 4, the claim is rejected as applied to claims 1 and 2 with similar scope. The recited steps are performed by the elements recited in claims 1 and 2, wherein Thomas in view of Najarian teaches as explained above.

Regarding claim 5, wherein the PC is 10 operative to take the measured frequency as a frequency axis and the power as a power axis based on the read measured frequency and power for plotting a frequency analysis graph of the wireless communication device, converting the measured frequency into a real frequency, and plotting a real frequency analysis graph of the wireless communication device to be measured by referring the frequency analysis graph to the calibration table (plotting in Fig.9b wherein x axis is the real frequency and y axis is the power level from 14, and wherein the IF frequency is converted to real frequency, and teaches the calibration table in Fig.15, note c.8, l.43-46 wherein the received IF frequency is converted and displayed as the real frequency).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Ahn whose telephone number is (571) 272-3044. The examiner can normally be reached on Monday-Friday.

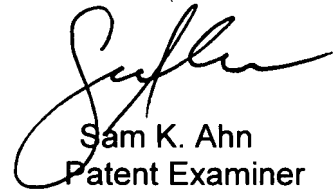
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021.



Art Unit: 2611

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam K. Ahn  
Patent Examiner

5/27/07